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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/854,463	05/15/2001	Miska Hannuksela	367.40118X00	8071

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ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-3873

EXAMINER

REKSTAD, ERICK J

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/854,463	Applicant(s) HANNUKSELA ET AL.	
	Examiner Erick Rekstad	Art Unit 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 15-62 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 2 is/are allowed.
- 6) ☒ Claim(s) 15-18, 20-28, 30-34, 37-40, 45, 48-52 and 55-58 is/are rejected.
- 7) ☒ Claim(s) 19, 29, 35, 36, 41-44, 46, 47, 53, 54 and 59-62 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2613

DETAILED ACTION

This is a First Action for application no. 09/854,463 in response to the RCE filed on September 14, 2005 where in claims 1-2 and 15-62 are presented for examination.

EXAMINER'S AMENDMENT

The application has been amended as follows:

The status of claims 35 and 36 are amended to be --(Previously Presented)--.

Claim Objections

Claims 23, 24, 25, 26, 45-62 are objected to because of the following informalities: The claims state either "An encoder" or "A decoder". It is suggest by the examiner to replace these statements with a statement referencing a device or apparatus in order to prevent a 112 rejection. A possible amendment would be "An apparatus for encoding". Appropriate correction is required.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15, 21, 22, 23, 26, 28, 32, 33, 39, 40, 50, 51, 57, and 58 are rejected under 35 U.S.C. 102(b) as being anticipated by 'Concealment techniques for data-reduced HDTV recording' by Kharatichvili et al.

[claims 15, 21, 22, 23, 26, and 28]

Kharatichvili teaches a method and apparatus of encoding a video signal representing a sequence of pictures to form an encoded video signal, the method comprising selecting an encoding mode for a picture of the sequence and providing an

Art Unit: 2613

encoding mode indicator in the encoded video signal to indicate the encoding mode of the picture (Page 175, First Col., Fig. 1), the encoding mode indicator to be used in a corresponding decoding process for the picture, determining a separate error concealment method indicator for the picture or a part thereof to indicate a type of error concealment method to be used in the corresponding decoding process for the picture or said [art thereof when an error occurs, and providing the error concealment method indicator in the encoded video signal (Page 179 Section 3.3, Fig. 3 and 6). As required by claims 21, 22 and 26, the decoder uses the flag to determine the error concealment method to use. For high motion the concealment uses temporal repetition and when there is low motion concealment uses spatial interpolation (Page 179, Section 3.3, Fig. 3 and 6). As shown above the encoder provides an encoded signal containing the mode flag as required by claim 28.

[claim 32, 39 and 57]

As shown above, the error concealment indicates the type of error concealment to be applied to each block (Page 179). Note that a block is a rectangular area.

[claims 33, 40, 51 and 58]

Kharatichvili further teaches the mode is determined for each block (Page 175).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2613

Claims 16-18, 20, 24, 25, 30, 31, 34, 37, 38, 45, 48, 49, 52, 55 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over 'Concealment techniques for data-reduced HDTV recording' by Kharatichvili et al. in view of US Patent 6,351,493 to Reed et al.

[claims 16 and 24]

As shown above, Kharatichvili teaches the method of claim 15. Kharatichvili teaches the use of an activity criterion to determine the resulting mode decision flag (error concealment method indicator) (Page 175 Col. 1). Kharatichvili does not specifically teach the activity criterion being the comparison between a measure of similarity with a predetermined criterion of similarity. Reed teaches the use of comparing a measure of similarity with a predetermined criterion of similarity as a means to determine a mode (Col 4 Lines 5-18, Col 5 Lines 39-51, Fig. 1 and 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the activity criterion of Reed with the encoding method of Kharatichvili in order to determine the mode of a frame as taught by Reed.

[claims 17, 20 and 25]

Kharatichvili teaches the switching between modes is adaptive (Page 175 Col. 1).

[claims 18, 31, 34, 38, 45, 49, 52 and 56]

Kharatichvili teaches the addition of a mode decision flag to the bitstream for decoding purposes. Kharatichvili does not specifically teach the addition of the flag in the picture header. Reed teaches the identification of the change in the picture header

Art Unit: 2613

in order to provide a compressed bitstream (Col 4 Lines 5-18). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the mode decision flag of Kharatichvili with the picture header of Reed in order to provide a compressed bitstream. Note: the picture segment header is viewed by the examiner to be the picture header.

[claims 30, 37, 48 and 55]

As shown above Kharatichvili teaches the requirements of claims 16, 21, 24, and 26. Kharatichvili further teaches the mode flag as only two values (Page 175).

Kharatichvili does not teach the use of the mode flag as a scene identifier. Reed teaches the detection of excessive motion is considered a scene change and the mode of the frame is changed (Col 4 Lines 5-18). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the mode flag of Kharatichvili with the scene change detection of Reed in order to detect scene changes. Note that the last picture of the first scene has a non-identical scene indicator value from the first picture in the next scene.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kharatichvili as applied to claims 23 and 26 above, in view of Reed and further in view of US Patent 6,515,695 to Sato et al.

[claim 27]

As shown above for claims 23 and 26, Kharatichvili teaches the encoder and decoder as required by claim 27. Kharatichvili teaches an encoding method similar to mpeg for recording on a vcr (Fig. 1). Kharatichvili only teaches the encoding in

Art Unit: 2613

intraframe or intrafield mode. Reed teaches a similar mode detection except with intra or inter mode encoding (Col 3 Lines 11-35, Col 4 Lines 24-30, Col 5 Lines 44-45, Fig. 2). Reed further teaches the use of the scene change detection method in video coding schemes such as MPEG-1, MPEG-2, MPEG-4 and H.263 (Col 3 Lines 50-53, Col 4 Lines 38-44). Sato teaches a portable videophone system containing a video codec for the display and recording of MPEG-4 video (Abstract, Col 8 Lines 49-61, Col 9 Lines 21-26). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the error concealment method of Kharatichvili with the encoder and decoder of Reed as both Kharatichvili and Reed teach a mode for high motion or low motion. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the encoder and decoder of Kharatichvili and Reed as the codec for the system of Sato as the encoder and decoder are MPEG based.

Double Patenting

Applicant is advised that should claim 19 be found allowable, claim 19 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

The combination of claim 15 with dependent claim 19 would result in a substantially similar claim to independent claim 1.

Art Unit: 2613

Allowable Subject Matter

Claims 19, 29, 35, 36, 41-44, 46, 47, 53, 54, and 59-62 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-2 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The following is an examiner's statement of reasons for allowance:

In regards to claims 1 and 2, the claims pertain to a novel method for coding video that the examiner was unable to find in several prior art searches. As noted in the previous office action, dated June 14, 2005, the claims define over the combination of the prior art of Choon (US Patent 5,410,553) and Reed et al. (US Patent 6,351,493).

The claims further teach over 'Concealment techniques for data-reduced HDTV recording' by Kharatichvili et al. Kharatichvili teaches a HDTV encoding and decoding process for recording on a VCR wherein a mode decision flag is added to the bitstream for controlling error concealment during the decoding process (Pages 178-179).

Kharatichvili is silent on the use of H.263 encoding format and the inclusion of the error concealment indicator in the Supplemental Enhancement Information. These features taken with the others in the claims define over the prior art.

In regards to claims 19, 35, 46, and 53, as shown above Kharatichvili teaches the requirements of independent claims 15, 21, 23 and 26. Kharatichvili is silent on the use

Art Unit: 2613

of H.263 and the inclusion of the error concealment indicator in the Supplemental Enhancement Information. This feature taken with the others in the claims define over the prior art.

In regards to claims 29, 36, 41-44, 47, 54, and 59-62, Kharatichvili and Reed teach the requirements of claims 16, 21, 24, 26, and 37. Kharatichvili and Reed are silent on the use of the indicator as a "scene identifier associated with the scenes, the scene identifier having the same value for all pictures of a scene, the scene identifier having a different value for each different scene" as required by claims 29, 36, 47, 54, and 59-62. Kharatichvili and Reed are further silent on the decoding method wherein "scene indicator for the picture with a scene indicator for a temporally neighboring correctly decoded picture and, if the scene indicator for the picture is the same as the scene indicator for the temporally neighboring correctly decoded picture, applying a temporally predictive error concealment algorithm in the decoding process for the picture " as required by claims 41-44. These features taken with the others in the claims define over the prior art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 571-272-7338. The examiner can normally be reached on 8-5.

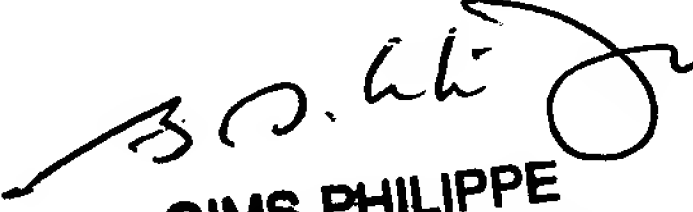
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone

Art Unit: 2613

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Erick Rekstad
Examiner 
AU 2613
(703) 305-5543
erick.rekstad@uspto.gov


GIMS PHILIPPE
PRIMARY EXAMINER